Amendments to the Claims:

All pending claims are set forth here. This listing of claims will replace all prior versions and listings of claims in the application. Cancel claims 4 and 6. Amend claims 1, 5, 7, 13 to read as follows. Add new claims 15-16, which read as follows.

1 (currently amended). A method for fabricating an electrical connection, the method comprising:

providing an electrically non-conductive layer of a first selected material, having a first selected thickness, on an exposed surface of a substrate of selected substrate material;

providing an electrically conductive layer of a second selected material, having a second selected thickness, in a first selected pattern having at least first and second spaced apart conductive layer components, on an exposed surface of the non-conductive layer;

depositing a ~~thin patterned~~ catalyst array, including ~~two or more~~ at least first and second spaced apart catalyst array elements, of metallic nanowire ("MeNW") catalyst material of a selected catalyst thickness on ~~an exposed surface of~~ the respective first and second conductive layer components ~~so that a portion of the conductive layer lies between the substrate and each element of the catalyst array~~;

providing a gas or vapor of a selected metallic or organometallic material around the catalyst ~~patterned~~ array, and allowing at least [[one]] first and second MeNWs to grow, substantially perpendicular to a plane $\prod$ of the conductive layer ~~between each element of the catalyst array and the conductive surface~~ on the respective first and second conductive layer components;

providing a diffusion barrier of a selected barrier material as a thin coating surrounding a side wall of the at least two MeNWs and overlying exposed portions of the conductive layer, to prevent migration of the MeNW material;

depositing an insulation layer of a selected insulation material ~~over the catalyst array and~~ over the exposed portions of the conductive layer and around the at least two MeNWs so that [[a gap]] an interstitial region between the at least two ~~adjacent~~ MeNWs contains the insulation material; and

applying a chemical mechanical polishing process or etching process to remove ~~the catalyst array,~~ a fraction of each of the at least two MeNWs, and a fraction of the insulation layer so that each of the at least two MeNWs [[have]] has an end exposed.

2 (original). The method of claim 1, further comprising applying an electrical field **E1**, substantially perpendicular to said plane $\prod$, as said at least one MeNW is grown.

3 (original). The method of claim 1, further comprising applying an electrical field **E2**, substantially parallel to said plane $\prod$, as said at least one MeNW is grown.

4 (canceled).

5 (currently amended). The method of claim [[4]] 1, further comprising selecting said diffusion barrier material from the materials Ti_xN_y and Ta_xN_y, where x and y are positive numbers.

6 (canceled).

7 (currently amended). The method of claim [[6]] 1, further comprising selecting said diffusion barrier material from the materials Ti_xN_y and Ta_xN_y, where x and y are positive numbers.

8 (original). The method of claim 1, further comprising selecting said conductive layer material from a group of materials that includes Cu, Ag, Au, Pt, Pd, Ni, Fe, Co, Ir, Ti, Zr and a metal-doped silicide

9 (original). The method of claim 1, further comprising selecting said catalyst layer material from a group of materials that includes Al, Au, Ag, Ni, Ir, Mo, Pt and Pd.

10 (original). The method of claim 1, further comprising selecting said metallic material for said at least two MeNWs from a group of materials that includes Cu, Cu_xO_y,Al, Al_wCu_z, Ag, Au, Pt and Pd, where w, x, y and z are positive numbers.

11 (original). The method of claim 1, further comprising selecting said insulation material from a group of materials that includes Si, Si_aO_b and Si_cN_d, where a, b, c and d are selected positive numbers.

12 (original). The method of claim 1, further comprising selecting said thickness of said catalyst layer in a range 0.1 – 20 nanometers.

13 (currently amended). The method of claim 1, further comprising selecting said thickness of said conductive layer in a range ~~0.2 250~~ 0.2 – 250 nm...

14 (original). The method of claim 1, further comprising providing at least one of said at least two MeNWs with a diameter, measured in a plane substantially parallel to said plane $\prod$, in a range 1 – 250 nm.

15 (new). The method of claim 1, further comprising choosing said diffusion barrier material to be an electrically non-conductive material.

16 (new). The method of claim 1, further comprising choosing said diffusion barrier material to be an electrically conductive material.